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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,220	06/13/2001	David Holtzman	OPI-101-CIP-II	6182
28970	7590	04/28/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN LLP			A VELLINO, JOSEPH E	
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MCLEAN, VA 22102			PAPER NUMBER	

2143

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/879,220	Applicant(s) HOLTZMAN ET AL.	
	Examiner Joseph E. Avellino	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 13-55, 60, 64-69 and 71-90 is/are rejected.
- 7) ☒ Claim(s) 5-8, 10-12, 56-58, 61-63 and 70 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-58, and 60-90 are pending in this examination; claims 1, 26, 33, 52, 64, and 72 independent.

#### ***Allowable Subject Matter***

2. Claims 5-8, 10-12, 56-58, and 61-63, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and fixing any rejections based on indefiniteness.

3. Exemplary claim 5. Claim 5 discloses that the influence score is computed based on the equation:  $F = a * \sum_{i=1}^m Rel_i * d_i + b * \sum_{i=1}^m I_i * d_i$  wherein a and b are selectable weighting constants Rel is the relevance of a message, I is the impact of a message, d is a decay function that reduces the impact of older message, and wherein m is the number of messages used to compute

#### ***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 9, 13-15, 26-31, 33, 35-38, 52-55, 60, 64-69, and 71-75 are rejected under 35 U.S.C. 102(e) as being anticipated by Knight et al. (USPN 6,571,234) (hereinafter Knight).

5. Referring to claim 1, Knight discloses a system for processing message traffic from a plurality of electronic discussion forums (e.g. abstract; col. 27, lines 20-29), comprising:

a message collector for collecting messages from the plurality of electronic discussion forums (col. 27, lines 20-29); and

means for processing the messages based on a series of topics in order to track a plurality of pseudonyms (i.e. authors), wherein the processing includes computing a relevance score (the Office takes the term "relevance score" to be broadly construed as "a method to disseminate messages from other messages based on a criterion") for a collected message based on at least one topic (i.e. area/class/subclass classification system for messages) (e.g. abstract; col. 22, lines 22-67).

6. Referring to claim 2, Knight discloses the means for processing is further adapted to compute a buzz score based on a set of messages for the at least one topic (e.g. abstract; col. 16, lines 45-55).

7. Referring to claims 3 and 4, Knight discloses the buzz score is computed according to the formula  $B = \sum_{i=1}^n (Rel_i \cdot F_i)$  where Rel is a computed relevance score for a message (i.e. topic classification) F is a computed influence score for a poster of a message (i.e. author) and n is the number of messages in the set (this formula is interpreted in the binary sense, such that the Buzz score is all the messages that satisfy

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the formula "if message i contains the selected author AND the selected topic then add it to the list". All the corresponding messages which satisfy this criteria are added to the list and shown to the user) (col. 16, lines 48-55).

8. Referring to claim 9, Knight discloses the means for processing is adapted to compute a relative buzz score that measures relative changes in the posting activity level (i.e. if the author adds more messages pertaining to this topic, they will satisfy the criteria and then be added to the list) (col. 16, lines 48-55).

9. Referring to claim 13, Knight discloses the means for processing is further adapted to compute an opinion rating for a collected message (i.e. identify a classification) (e.g. abstract).

10. Referring to claim 14, Knight discloses the opinion rating is computing using a textual analysis software application (i.e. content sort routine) (col. 22, lines 7-43).

11. Referring to claim 15, Knight discloses the textual analysis software application compares a content of the collected message with a plurality of known words and phrases indicative of expressions of an opinion (i.e. opinion is taken to mean an opinion of a subject which then can be classified (col. 22, lines 7-43).

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12. Claims 26-31, 33, 35-38, 52-55, 60, 64-69, and 71-75, are rejected for similar reasons as stated above. Furthermore Knight discloses computing a migration score providing a measurement of the movement of posting activity levels between topics or groups of topics from the series of topics (col. 20, lines 35-53).

***Claim Rejections - 35 USC § 103***

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knight.

14. Referring to claim 34, Knight discloses the invention substantively as described in claim 33. Knight furthermore discloses linking forums to associated topics (col. 9, lines 29-35). Knight does not specifically state using tables in the database to link forums to associated topics, however it is well known that tables are commonly used in databases and would be obvious to one of ordinary skill in the art to modify the system of Knight to include tables to further facilitate data warehousing and retrieval, thereby reducing data seek times and processing overhead.

Claims 16-25, 39-41, 39-51, 76-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knight in view of Lang et al. (USPN 6,314,420) (hereinafter Lang).

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15. Referring to claims 16, 17, and 20, Knight discloses the invention substantively as described in claim 13. Knight does not specifically disclose that the computed opinion rating is a positive and a negative sentiment score. In analogous art, Lang discloses another system for processing messages which includes computing a positive and a negative sentiment score (col. 16, lines 10-47). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

16. Referring to claims 18 and 19, Knight discloses the invention substantively as described in the claims above. Knight does not specifically disclose computing an aggregate positive sentiment score for a set of collected messages. In analogous art, Lang discloses another system for processing messages which includes computing an aggregate positive sentiment score for a set of collected messages wherein it is computed according to the equation  $S_p = \sum_{i=1}^m S_{pm}$  (as applying this formula to the example given in Lang, m is the set of articles written by author K,  $S_{pm}$  is the rating of each article given by the user A or B,  $S_p$  is inherently calculated since all the ratings are added together and then divided by the total number of ratings, # in sample, to get the average rating) (col. 18, lines 18-56). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight

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in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

17. Referring to claims 21 and 22, Knight discloses the invention substantively as described in the claims above. Knight does not specifically disclose computing an aggregate negative sentiment score for a set of collected messages. In analogous art, Lang discloses another system for processing messages which includes computing an aggregate negative sentiment score for a set of collected messages, by computing an IRP negative vector (in the example for four articles, or messages) which can be added (i.e. summed) together to compute the threshold for the author (col. 13, lines 12-34; col. 15, lines 29-67; col. 16, lines 10-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

18. Referring to claim 23-25, Knight discloses the invention substantively as described in claim 16. Knight does not specifically disclose the sentiment score is a net sentiment score and is further adapted to compute an aggregate net sentiment score for a set of collected messages. In analogous art, Lang discloses another system for processing messages which includes computing a net sentiment score and is further adapted to compute an aggregate net sentiment score for a set of collected messages (i.e. combining the IRP negative and positive vectors for each article in order to come



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up with a rating for the article) (col. 13, lines 12-34; col. 15, lines 29-67; col. 16, lines 10-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

19. Referring to claim 39, Knight discloses the invention substantively as described in the claims above. Knight does not specifically disclose the message collector and the message categorizer is adapted to compute an influence score for the extracted pseudonym author. In analogous art, Lang discloses another system for processing messages which includes computing an influence score for the extracted pseudonym author (i.e. rating) (col. 13, lines 12-34; col. 15, lines 29-67; col. 16, lines 10-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

20. Referring to claim 40, Knight discloses the invention substantively as described in the claims above. Knight does not specifically disclose the influence score is based at least in part on the impact of prior postings by the extracted pseudonym author on other pseudonym authors. In analogous art, Lang discloses another system for processing messages wherein the influence score is based at least in part on the impact

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of prior postings by the extracted pseudonym author on other pseudonym authors (i.e. the IRP of the author uses the average of ratings given to the author so far, and ratings given to all authors) (col. 15, lines 28-67). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

21. Referring to claim 41, Knight discloses the invention substantively as described in the claims above. Knight does not specifically disclose computing a reputation score for the extracted pseudonym author. In analogous art, Lang discloses another system for processing messages which computes a reputation score for the extracted pseudonym author (col. 13, lines 12-34; col. 15, lines 29-67; col. 16, lines 10-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Lang with Knight in order to make network searches for information entities relevant to user queries to produce significantly improved search results as supported by Lang (col. 2, lines 20-27).

22. Referring to claim 42, Knight-Lang discloses the invention substantively as described in the claims above. Furthermore, Knight-Lang does disclose the reputation score is based on a plurality of influence scores for the extracted pseudonym author under multiple local pseudonyms, however does not disclose that these local

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pseudonyms have been associated into a universal pseudonym. However it is well known that associating local usernames into a universal username in order for client tracking is well known and expected in the art. By this rationale, it would have been obvious to combine the local pseudonyms under a universal pseudonym in order to fully track the authors throughout different forums, regardless of what names they use, thereby increasing the likelihood that all the related information to an author will be associated with that person, rather than just the username.

23. Claims 43 and 44 are rejected for similar reasons as stated above.

24. Referring to claim 45, Knight discloses the invention substantively as described in the claims above. Knight furthermore discloses that search robots can retrieve content from outside sources such as UseNet or other online message board systems (col. 9, lines 30-35) and recitation of numerous electronic discussion boards such as Yahoo forums, Raging Bull, Motley Fool, and others (col. 1, lines 45-60). Furthermore it is well known that Silicon Investor is a well known electronic discussion forum and would have been known to one of ordinary skill in the art with minimal research. By this rationale it would have been obvious to one of ordinary skill in the art to modify the electronic discussion forums to comprise the Raging Bull, Motley Fool, Silicon Investor, and Yahoo forums since Knight discloses that other online message board system may be used in the system as disclosed above. This would lead one of ordinary skill in the

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art to search for other discussion boards and eventually finding the ones recited in the claims.

25. Referring to claim 46, Knight discloses the series of topics includes stocks comprising the S&P 500 (Figure 3B).

26. Referring to claims 47 and 48, Knight discloses the group of topics corresponds to a stock index, and wherein the buzz score is computed by aggregating the buzz scores for the stocks making up the stock index (col. 16, lines 9-38).

27. Referring to claim 49, Knight in view of Lang discloses the invention substantively as described in the claims above. Knight in view of Lang do not specifically disclose the series of topics include a plurality of movies or television shows. However it is well known that discussion forums exist for these genres and would have been obvious to one of ordinary skill in the art to modify the invention of Knight-Lang to include movies and television shows to further expand the customer market, and thereby gain users.

28. Referring to claim 50, Knight-Lang disclose the invention substantively as described above. Knight-Lang do not specifically disclose comparing the buzz score to a threshold to identify unusual discussion patterns. However it is well known to monitor and keep track of discussion patterns in order to determine what is being said during the posts (i.e. illegal activity, swearing, misuse of the system, etc). By this rationale it would

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have been obvious to compare the buzz score to a threshold to identify unusual discussion patterns to protect the system and further keep discussions pertaining to legal matters.

29. Claims 51, 76-90 are rejected for similar reasons as stated above.

### ***Response to Amendment***

30. The Office has considered the amendments to claim 56. The rejection under 35 USC 112, second paragraph has been withdrawn.

### ***Response to Arguments***

31. Applicant's arguments filed March 2, 2005 have been fully considered but they are not persuasive.

32. Applicant argues, in substance, that (1) Knight does not disclose computing a relevance score, merely only that each message is processed and assigned a tag specifying the subject classification to which that message will be assigned, and (2) the Office misconstrues the formula of the buzz score and accordingly does not disclose this in Knight.

33. As to point (1) Applicant's attention is turned to generally col. 12. Applicant will notice that the processing text of the posting to determine where it should be classified,

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and furthermore assigns tags for logical inferences that can be drawn from the substance of the message (lines 25-30). This "computing a relevance score" is an inherent feature of the logical inference processing of Knight since digital computers (which is what the system of Knight) cannot actually "think logically", and therefore must generate a scoring system to which associate these disparate entities with one another. By this rationale the rejection is maintained.

34. As to point (2) Applicant is correct in stating that the "show author's messages" function filters out messages written by a specific author, however this feature still conforms to the claimed function. As seen in the rejection above, the show author's messages feature does compute a buzz score for a set of messages using a relevance scores (i.e. the selected topic, since these messages are those of relevance to the user) and the influence scores for the selected author (i.e. the selected author), and as taken in the sense of binary algebra, the formula as stated in claims 3 and 4 recite "for every message from 1 to n determine if the message pertains to the selected topic AND (the binary operation for multiplication) the selected author". By this rationale, the rejection is maintained.

### ***Conclusion***

35. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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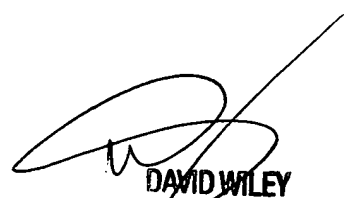
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A handwritten signature, possibly reading 'A', is written in black ink.

JEA

April 5, 2005

A handwritten signature, possibly reading 'DW', is written in black ink.

DAVID WILEY  
SUPERVISOR PATENT EXAMINER  
TECHNOLOGY CENTER 2100